

Gustavus Disposal & Recycling Center (DRC) Quarterly Staff Report
Paul Berry, DRC Manager/ Operator
Monday, May 11th, 2020

My last quarterly report was at the February 10th General Meeting. That report consisted only of the FY19 Annual report. My next quarterly report is scheduled for the August 10th General Meeting.

I will be covering events and issues that have occurred since my November quarterly report. I feel there are several issues on which Council members should hear my input on as we move forward, so this report is longer than usual.

General Operations and Management

Labor

Advertisement for the DRC Temporary Labor Pool (Pool) for the 2020 calendar year went out in November of last year with applications and interviews occurring in December. There were four applicants for the Pool: Artemis BonaDea, David Cannamore, Paul Dzubay and Jeff Irwin. All of these individuals had prior experience at the DRC and were recommended for hire in the 2020 Pool. David Cannamore has been the primary operator for this past winter assisted by either Artemis or Paul D on Saturdays. In the summer, he will be joined by Jeff with additional days by Paul D.

COVID-19 impacts

In terms of operations, the COVID-19 crisis has four main impacts on the DRC: 1) customer flow; 2) the postponement of the DRC Operator as a year-round, regular position; 3) an overall reduction in the amount of waste being processed at the DRC; and 4) the postponement of important capital projects such as the new building.

Customer flow: On March 17th the City mandated that only one vehicle/ customer at a time would be processed at the DRC. David posted a sign at the DRC explaining this and fliers were posted at the facility. David has remarked that as of yet he has heard no complaints from customers about the situation and that people have been understanding and supportive. I have used this opportunity to make further improvements with the DRC's traffic flow by laying out traffic signs and delineators so that we have designated entry and exit lanes. Now people wait in a line and advance to the main building when it is their turn. This arrangement provides lots of room for people to unload their waste and then safely back-out when they are through with their transaction.

Because only one customer is allowed into the main building at a time, the operator(s) have taken a more active role in helping the customers in unloading and separating their wastes and sorting their recyclables. This is to help with the customer flow and to try to prevent customers from waiting too long. David has reminded us "don't get too used to this." When the one customer at a time mandate is lifted, the DRC will keep the new traffic flow controls but will allow up to three or four cars to access the main building at one time.

Regular DRC Operator: While I am disappointed to have the new DRC Operator position postponed I can understand the Council's concerns with starting a new regular position at this time of fiscal uncertainty. However, it is in the Council's best interest to make sure there is an operator that is thoroughly trained and committed to the service before such a point in time that I am no longer in the City's employment.

Reduction of waste amounts: In terms of changes in the waste flow this year compared to the past, I have been comparing monthly volumes between 2018, 2019 and 2020. Noticeable

changes started to occur in March with this March having 21% less waste delivered than the average of 2018 & 2019. And for April there is a 19% reduction from the previous two years. I am sure this summer will have less waste than previous summers, but I am also fairly certain that we will see more waste in the summer than we did in the winter even with the COVID-19 crisis. Therefore it is important that the DRC be fully staffed with two operators for each day that we are open to the public during the summer months.

A slower season is the opportunity to take care of a backlog of projects including: bale burial on the mound, packaging and shipping e-waste and setting up the new in-flow storage area when it is ready.

The compost scene

I hope each of you had an opportunity to look at Sean Neilson's drone eye views (on Facebook/ Gustavus Rumor Mill) of the line of cars waiting for compost during the first day of compost sales on April 22nd, which also happened to be Earth Day.



The first day of compost sales is always a well attended event but this year it seemed especially so. At one point around nineteen cars were in a line waiting for their allotted share and nineteen cars is a lot for Gustavus as we are not that big of a town. The compost limit was two 32 gallon cans per household. There is a limit because there is more demand than supply (I like to say that I want everyone to be equally disappointed because we all want more). The compost is inexpensive with two cans going for \$36.50. COVID-19 concerns were the theme so what was once a group event with several customers loading their own containers at the same time was now a one-at-a-time scene with people waiting their turn

and staying their cars. Traffic was kept in a line (thanks to those delineators and signs) so that metering the traffic was easy. I used our Bobcat loader to dump compost in cans and then lift those cans to the height of the truck bed or back of the car. So loading was fairly quick with just myself and David. We both wore our face masks and rinsed off our gloves in the bleach bucket between customers. The event felt positive and the compost looks really good. We sold most of the compost during the event and what remained was sold the following Wednesday. I would like to thank Brittney Cannamore who volunteered during the two days of compost sales, operating the point-of-sale terminal.

This year I was able to send a sample of our compost to a lab in Washington State for analysis. (The sample was a one gallon bag of compost taken from five different locations in the compost pile.) Testing provided information on such things as pH (7.3); electrical conductivity (a measurement of salts – which tested low to mid range), total nitrogen, cucumber bioassay germination (concluded that the sample was very mature: safe for use in containers), CO₂ evolution, sieve analysis (particle size distribution), inerts, and testing for Salmonella (no detect) and EPA 503 metals (Arsenic, cadmium etc. - no detect to acceptable low readings). I have been wanting to do this testing on an annual basis for several years to ensure that we are distributing compost that is both nutritional and does not have harmful pathogens or metals. I will eventually be posting this report on the DRC's web page.

My next area to tackle is weed testing and weed control. While I keep the compost cure piles covered most of the time and there is a barrier beneath the cure pile, wind blown seeds can work their way in.

Updating the Scale House/ Point of Sale software

I started this project in January when I was working remotely in Hawaii. I used that time to become familiar with the Trash Flow software, the customer support personnel at Trash Flow and starting the process of “populating” the new database with information from the older system. This process is much slower than I thought it would be. The project also includes setting up a new computer and a new scale. My goal is to have the current system and the new system set up in the main building so I can operate the new system along side the old one until such a time that the new system is ready for going live – no later than July 1st. Having this be a slower than normal summer is making this transition easier. As I set up each new part of the system from software installation, to connecting the digital scale and going through a customer transaction – I am adding this information to a manual that the operators can use when they are learning to use the software or when they are trouble shooting the system.

Groundwater testing

As mentioned in my November report, on October 28th, I sampled the ground water in two of the four ground water monitor wells that are within the DRC site. Our operating permit with ADEC determines how often we sample and what we sample for. We test pH, conductivity and a suite of metals including arsenic, lead and mercury. There were no red-flags from this sampling event. Our next ground water sampling event will be in 2021. As was noted in my previous report, one of our oldest monitor well, MW1, has gone dry and will need to be replaced. This project is listed as one of the DRC's mid-term projects in the City's Capital Project document.

The waste mound

In June of 2014 the last excavation of a below grade waste disposal pit occurred at the DRC. By the following summer that pit was full and all waste placement at the DRC since that time has been above grade. We are building what I refer to as “the mound”. The mounding of waste is typical with larger landfills but not so common with small, rural Alaskan landfills and there is a reason for that: they are harder and more expensive to manage and the more

waste you concentrate in a small area the greater the risk for unintentional odor production and ground water contamination. While these problems have not occurred at the DRC at this point in time, the possibility grows as the size of the mound grows. Larger landfills guard against these problems with an expensive liner beneath the landfill to collect all the leachate generated by the waste and an equally expensive cover over the landfill as a gas collection system which also provides for a source of methane for power generation. The cost of such improvements for our mound would be prohibitive.

One reason mounding is more expensive than below grade waste disposal systems is because we have to import all our cover material. Additionally the layout of the mound needs to be engineered to accommodate rainfall and snowfall – so that water is channeled away from the mound rather than into it. Usually a landfill operation would use a mixture of D1 and other compactible and water stable soils to facilitate the use of equipment when working on the mound. I am learning all this the hard way and unfortunately our mound falls short on all accounts: no liner, no gas collecting cover, no engineered design and our cover soils are typically overburden, silty clay soils and some pit run added to the mix. The lack of compacting soils that can hold a grade means that I get a lot of ponding and mud during the wet season or during a wet summer and this makes bale burial difficult.

It is the risks associated with our waste mound that keeps me focused on providing a long term waste solution for Gustavus that minimizes what must be placed in the mound and provides for a feasible way of exporting our problematic, non-recyclable waste. I hope to develop this solution as I work on that section of the Solid Waste Management Plan.

Approaching the problem of illegal dumping in the community

Our City Administrator, among others, has brought up the issue of illegal dumping in our community. This is an important issue for me and one that I have thought about a lot in the past 25 years. Five different factors go into a party not using the DRC: Cost, convenience, politics, privacy and ignorance. I will go into detail here:

Cost - my favorite quote for this one is "I already paid for it once, why should I pay for it again?" Not wanting to pay for waste disposal is a common reason for not using the DRC. This can also be by degree: people who "light-weight", avoiding heavy items (books, glass, food waste, car batteries) and just bringing in what is light (waste paper, plastics, tin cans, aluminum cans). Light-weighting happens with pay-as-you-throw facilities such as ours. I also have to point out the difference between not wanting to pay and not having any \$. They are two different things.

Convenience - you can't match the convenience of a homeowner's hole in the backyard (environmental costs aside) which is open 24 hours a day and it is right at the location of waste production. No packing things up and going for a drive. There is only one DRC and it is only open 12 - 18 hours a week depending on the season.

Politics - this is where the person doesn't like me or someone else on the DRC staff or they don't like the City and don't want to support a City service.

Privacy - the DRC is staffed, you cannot always discretely get rid of something you feel funny about at our facility (like a trash can full of liquor bottles). DRC Operators understand this and we respect people's privacy (but we also don't want to bale certain things so we need to know what is going into the non-recyclable waste stream). So if someone has waste that they feel they will be judged by, or they are concerned that they don't know the rules and feel they would have to ask for help but don't like being in that position, then there is a tendency for that person to be shy of using the DRC. Privacy is

especially challenging in a small town with a long memory.

Ignorance - someone doesn't know where the DRC is or even that it exists. This can happen in the summer when you have someone who comes off the ferry and doesn't know anyone and doesn't have an introduction to the community.

Making trash free at the DRC only addresses one of these concerns, cost. Cost is a big one but it isn't everything and just making trash free isn't going to cure illegal dumping by itself.

One grass roots solution has started: two people have donated a total of \$600 to the DRC's new BurnBanAccount, this is an account originally set up as a reaction to illegal dumping and the State's burn ban (which now does not effect Southeast) but it is there for anyone to use if they are concerned about the cost of trash disposal.

I am not against free waste. The DRC is a service rather than a business. The DRC has always taken litter for free. However, as the manager of the DRC I am always concerned about maintaining our high diversion ratio which depends on customers separating out their recyclable waste, free or other wise. I am also concerned about the DRC's \$ budget and labor budget and I am concerned about the rate of growth in our waste mound. But with communication things can work out. For example several years ago during a communal clean-up of a neglected property, a literal dumptruck load of waste was brought to the DRC and dumped in front of the main building. This was (sort of) planned and I was well aware of it so I made sure there was more than one operator present and that we could process all the material in a reasonable amount of time. There were also two individuals, un-associated with the property and of their own volition, who later donated funds to help cover the costs of the clean-up event.

When the Council is looking at free waste disposal one idea that I would give serious thought to is taking compostable food waste for free. Either just households or both households and businesses. After witnessing the popularity of compost sales in April I was reminded of the importance of compost in local food production. I have also acknowledged that there will be less food waste coming into the DRC this summer on account of Glacier Bay Lodge not operating its kitchen - so there will be less compost for next year as a result of this.

As a pay-as-you-throw facility, receiving payment from in-flowing waste is our largest source of income but the Council can elect to cover that shortfall with additional support from the general fund. In doing so, the Council would also have to acknowledge that such price supports effect the city's payroll vs city income ratio, that this is more work and less income. The DRC could also raise the price for its compost by 50% - 100% but that would still not cover the entire cost of the operation.

As an example, here are the DRC's quantities received and revenue generated from food waste coming in during May and June for the previous two years.

	2018 pounds	charges	2019 pounds	charges
May	1,835	\$348.65	1,396	\$265.24
June	4,213	\$800.47	5,131	\$974.89

Notes:

All weights DO NOT include Glacier Bay Lodge quantities (which more than double the numbers)

Except for Glacier Bay Lodge, household and business quantities are not separable.

Compost sales last year were \$2,509.19 and this year they were \$2,385.25.

I would advise the Council to move in small steps and watch how things work. Such as letting the BurnBanAccount work for the month of May. How much are people using it? Should it be expanded/supported by the City or do we need some other approach? Should we expand the use of bear proof cans like the ones by the dock? Does the Council wish to look at the City providing waste collection services?

Community Chest

COVID-19 concerns have closed the Chest for the time being and the last day of operation for the Chest was Saturday March 14th. Following the closure the facility received a thorough disinfecting. Normal operation of the Chest will resume when State and City mandates allow it. In the meantime DRC staff will be going forward with building maintenance such as repair of the wooden fence and continuing the painting project.

Since my last report in November the following people have worked sales at the front desk: Becky King, Catherine and Hannah Anderson, Judy Brakel, Vicki Bender, Chris Spute, Jo Nerger, Annie Mackovjak & Sandy Best.

Since November the following people have been helping sorting, purging and stocking: Betsy Lesh, Ben Sadler, Carolyn Warren, Becky, Katy Dighton, Cathy Martineau, Laura Ross, Artemis BonaDea, Annie, Kim Ney. As always I would like to thank Betsy for all her time in keeping the Chest going.

Solid Waste Management and Facility Planing Process (“SWMP”)

Before the COVID-19 pandemic changed everything, we had planned that on Friday April 3rd there was to have been a field trip for the Council at the DRC. I was really looking forward to having an opportunity to talk with the Council, first hand, about the various DRC improvement projects that are mentioned in the SWMP and the City’s Capital Improvement Plan. I wanted to show how all these projects tie together and why they are important. How a new and larger main building, three phase power and a larger horizontal baler not only allow us to better accommodate the volume of recyclables (paper, metals and plastics) that our facility receives now but also how these components play a part in extending the life of the mound by being able to make our non-recyclable waste denser.

Funding for important improvement projects such as the new main building/scale house, has been put on hold as the City enters turbulent fiscal waters. The Council had been looking at funding the construction of the new building out of the general fund but now there is a wait and see approach and I can certainly understand that sentiment. But I also want to point out how an improved facility would help us weather crises such as this one: A larger building would allow us to hold waste in a kind of quarantine for several days prior to processing. Or there was the potential challenge of having to deal with thousands of pounds of cardboard coming to our facility, that would not normally come in, because of a state-wide burn ban. If we had a larger, horizontal baler and the proper amount of space to hold materials going into it, we would not have a problem baling all of that cardboard for export. Better yet, with a shredder we could shred the cardboard, compost a portion of it with our food waste and compress the rest of it (with just the right amount of mixed paper blended in) into heating bricks that could be used in local wood stoves for heat.

When we have the right tools and processes, and a public that knows the importance of source-separating their waste, the materials that make up our waste stream become resources that can help our community become more self sufficient.

Capital Project Summaries

New Composting Facility/ Quonset replacement

Project description:

As described in previous reports, the objective of this project is to build a custom designed composting facility that is a 40' wide x 10' deep, ~12' high building with a shed roof constructed with a concrete lower portion and a wood framed upper portion. Each of the five 8' x 8' concrete bays that make up this building will have 4" PVC pipes embedded in the concrete that will feed air to two plenums in the floor. This will provide positive aeration into each of the bins. Air is supplied by central electric blower controlled by a timer and a temperature probe. Active air flow is not always necessary for our composting operation. However, when we are processing a lot of material or smelly material such as fish waste, active aeration is essential to avoid serious odor events. Active aeration also speeds up the composting process which is important if you have to process a lot of material with a fixed size facility. Each bin will have a garage door to provide access to the bin and provide for bird control when all the doors are closed.

Besides replacing the failing Quonset structure one of the goals of this project is to develop a more efficient work flow for the Operator so that no matter which operator does the routine, we are getting consistent results.

The new composting facility is to go where the Quonset currently sits so prior to the construction of the Compost facility the Quonset building will need to be carefully disassembled with the intent of re-using the metal framing material later for another project.

Project status:

The City has already invested over \$6,000 in getting the project to this point. I worked with 02 Composting Systems and Training (Washington state) in establishing the initial design. Later I worked with Terra Construction & Design (Matt Davis, Gustavus) and Timberline Engineering (Juneau) to make a set of build ready, stamped plans. The Council has awarded \$111,585 towards the compost yard improvement project of which replacing the Quonset was one component.

I believe it is important for the Council to move forward with this project for a variety of reasons. It is important for our composting operation but also the construction of the project will most likely be a local construction company so the money the City spends on this project is directed back towards the community.

In-flow Storage Area Project

This project is located in the area between Small Boat Harbor Road and the landfill fence. In-flow refers to recyclable materials such as aluminum cans, glass bottles, plastic bottles etc. that the public and businesses deliver, that are then stored up until sufficient quantities exist to be made into a bale or other process-sized batch. A more thorough description of the project can be found in my previous reports or in the project's scoping document. Eventually the project area will be fenced with chain link fencing which will include a visual screening element along the Small Boat Harbor Road side.

Project Status:

Fairweather Construction was awarded this project last year. Most of the work was done last December/ January with Elm's final work on the project completed this month. Fence installment will be done by DRC staff.

Household Hazardous Waste Facility

This project is the purchase of a 20' long x 8' wide & 8' high container designed for household hazardous waste storage. The unit includes spill containment, ventilation, shelving, and signage. The proposed container will be fully-constructed at a facility in the lower 48 and is ready to use upon arrival in Gustavus.

Project Status:

The funds for the purchase of this unit have been awarded by the Council. Once the In-flow storage area project is complete, which includes an area for the unit, I will be going over the specifications and will be developing a list of at least three vendors that I will solicit quotes from. Shipping costs have changed since I last went over the costs for this project and I will need to ensure that we can get the new facility here and set up within the project's budget.

New Building

I understand that the of the COVID-19 crisis has negatively impacted the funding of this project. However, the need for the new building is just as great, if not more so, than it has ever been. The DRC staff simply does not have enough room to do the work they need to do with the waste that is delivered.

The next step with this project is to work with an architect has has designed this kind of building because there are many unknowns such as ventilation and the use of a diesel powered loader inside the building.

The end, thank you.

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